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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Albert BORONAT *et al.*

Group Art Unit: 1645

Appln. No.: 09/921,992

Examiner: Not Yet Assigned

Filed: August 6, 2001

Atty. Docket: 16516.107

Title: **Methyl-D-Erythritol Phosphate Pathway Genes**

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

The attention of the Examiner is invited to the documents listed on the attached Form PTO-1449. Copies of the listed documents are submitted herewith.

It is respectfully requested that the information above be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

**CERTIFICATION AND/OR FEE**

Because this Information Disclosure Statement is being submitted prior to issuance of the first action on the merits of the above-captioned application, no certification or fee is required. Applicants likewise authorize a charge to Deposit Account Number 50-1824 for any other fees related to the present application that are not otherwise provided for in the accompanying documents.

Respectfully submitted,

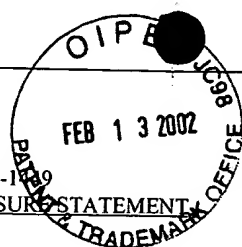
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FORM PTO-1519  
INFORMATION DISCLOSURE STATEMENT



ATTY. DOCKET NO.

16516.107

APPLICATION NO.

09/921,992

APPLICANTS

Albert BORONAT *et al.*

FILING DATE

August 6, 2001

GROUP

1645

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	AA1						
	AB1						
	AC1						
	AD1						
	AE1						

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION
	AF1						Yes No
	AG1						Yes No
	AH1						Yes No
	AI1						Yes No
	AJ1						Yes No

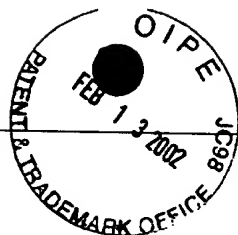
## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AK	1	Baker <i>et al.</i> , "Sequence and characterization of the gcpE gene of Escherichia coli", <i>FEMS Microbiol. Lett.</i> 94:175-180 (1992)
	AL	1	Bevan, "Binary Agrobacterium vectors for plant transformation", <i>Nucleic Acids Research</i> 12:8711-8720 (1984)
	AM	1	Duvold <i>et al.</i> , "Incorporation of 2-C-Methyl-D-erythritol, a Putative Isoprenoid Precursor in the Mevalonate-Independent Pathway, into Ubiquinone and Menaquinone of Escherichia coli", <i>Tetrahedron Letters</i> 38:6181-6184 (1997)
	AN	1	Eisenreich <i>et al.</i> , "The deoxyxylulose phosphate pathway of terpenoid biosynthesis in plants and microorganisms" <i>Chem. Bio.</i> 5:R221-233 (1998)
	AO	1	Elliott, "A Method for Constructing Single-Copy lac Fusions in Salmonella typhimurium and Its Application to the hemA-prfA Operon" <i>J. Bacteriol.</i> 174:245-253 (1992)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



FORM PTO-1449  
INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.

APPLICATION NO.

APPLICANTS

FILING DATE

GROUP

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	AA2						
	AB2						
	AC2						
	AD2						
	AE2						

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION
	AF2						Yes No
	AG2						Yes No
	AH2						Yes No
	AI2						Yes No
	AJ2						Yes No

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AK	<u>2</u>	Herz <i>et al.</i> , "Biosynthesis of terpenoids: YgbB protein converts 4-diphosphocytidyl-2C-methyl-D-erythritol 2-phosphate to 2C-methyl-D-erythritol 2, 4-cyclodiphosphate," <i>PNAS</i> 97(6):2485-2490(2000)
	AL	<u>2</u>	Rather <i>et al.</i> , "aarC, an Essential Gene Involved in Density-Dependent Regulation of the 2'-N-Acetyltransferase in <i>Providencia stuartii</i> ," <i>J. Bacteriol.</i> 179:2267-2273 (1997)
	AM	<u>2</u>	Rohmer <i>et al.</i> , "Isoprenoid biosynthesis in bacteria: a novel pathway for the early steps leading to isopentenyl diphosphate," <i>Biochem. J.</i> 295:517-524 (1993)
	AN	<u>2</u>	Rohmer, "Isoprenoid biosynthesis via the mevalonate-independent route, a novel target for antibacterial drugs?" <i>Prog. Drug. Res.</i> 50:135-154 (1998)
	AO	<u>2</u>	Rohmer, "The mevalonate-independent methylerythritol 4-phosphate (MEP) pathway for isoprenoid biosynthesis, including carotenoids," <i>Pure Appl. Chem.</i> 71 No. 12:2279-2284 (1999)
	AP	<u>2</u>	Simons <i>et al.</i> , "Improved single and multicopy lac-based cloning vectors for protein and operon fusions," <i>Gene</i> 53:85-96 (1987)

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